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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,658	06/26/2006	Hiroyuki Morioka	097929096574	5092

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EXAMINER
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POLYANSKY, ALEXANDER

ART UNIT	PAPER NUMBER
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4181

MAIL DATE	DELIVERY MODE
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11/20/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/568,658	<b>Applicant(s)</b> MORIOKA ET AL.	
	<b>Examiner</b> ALEXANDER POLYANSKY	<b>Art Unit</b> 4181	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4 and 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/15/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restriction Requirement***

Applicant's election of group I, claims 1-6, and claim 2 as species in the reply filed on 10/28/08 is acknowledged. Claims 3 and 4 were not elected as species and will be withdrawn from further consideration. Group II, claims 7-12 are also withdrawn from further consideration; however, the applicant reserves the right to file a divisional application covering the non-elected items. Because the applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). It is to be noted that a species election between (1) a laser beam, (2) UV light and (3) a combination of the above was made, thus applicant's election of only a laser beam is an election of claim 2 only and not claims 3-4 are apparently defined in the response.

### ***Information Disclosure Statement***

The information disclosure statement filed 02/15/06 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because JP6260471 has not been translated and can not be retrieved from the PATENT ABSTRACTS OF JAPAN website nor can it be retrieved on google. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kudome et al., JP 2252601.**

As per claim 1, Kudome teaches a fuel reforming apparatus (machine translated title) comprising a fuel passage through a reacting tube with an inner catalyst layer (machine translated abstract) and that catalyst is in the focus position of a reflecting mirror (machine translated abstract). The reflecting mirror provides for the irradiation means within tube as per the instantly claimed limitation.

As per claim 5, Kudome teaches the irradiation means has an automatic tracking equipment so as to optimize the inclination of the light (machine translated constitution). The instantly claimed limitation irradiation change means is met.

**Claims 1-2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Engler et al., US 5569441.**

As per claim 1, Engler teaches a fixed bed catalytic apparatus for purification of gases (figure 1 and abstract) wherein the catalyst is in direct contact with the fluid (column 2, lines 44-58), and the catalyst heating source is a laser which is the irradiating means (claim 1).

As per claim 2, Engler teaches the irradiating means is a laser beam (claim 1).

As per claim 6, Engler teaches using a 2W semiconductor laser for 10 seconds (column 6, lines 44-45), which leads the examiner to conclude that the laser has means for output control as

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per the instantly claimed limitation. Each critical element required by the instant claims is taught by Engler and minor variations in process design which is presumed to determine most effective outcome are envisaged.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Arakawa et al., US 20030017702.

As per claim 1, Arakawa teaches the decomposition of methanol to produce hydrogen using a photocatalyst generated by irradiation of the UV and visible light (see [0041]).

As per claim 6, Arakawa teaches the irradiation means has output control means (see Table 2, wavelength of irradiated light column). The wavelength is manipulated between greater than 300 to greater than 420 nm; therefore the instantly claimed limitation is met.

### ***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER POLYANSKY whose telephone number is (571)270-5904. The examiner can normally be reached on Monday-Friday, 8:00 a.m. EST - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL MARCHESCHI/  
Primary Examiner, Art Unit 1793

AP